CHICAGO TIMES

NEWSLETTER OF THE CHICAGO TI-99/4A USERS GROUP

Chicago U G throwing in the towel
Newsletter gets new name— PC TImes
ATTA BOY JAN!

APRIL FOOLS 1989
EDITOR: Bill Cosby

15

NEW MEETING PLACE THIS MONTH- - -
The meeting will be Sat. APRIL 8 at the BROADVIEW AMERICAN LEGION HALL
There will be a demo on Jan Janowski's HOME MADE PORTABLE TI. 1-3 pm

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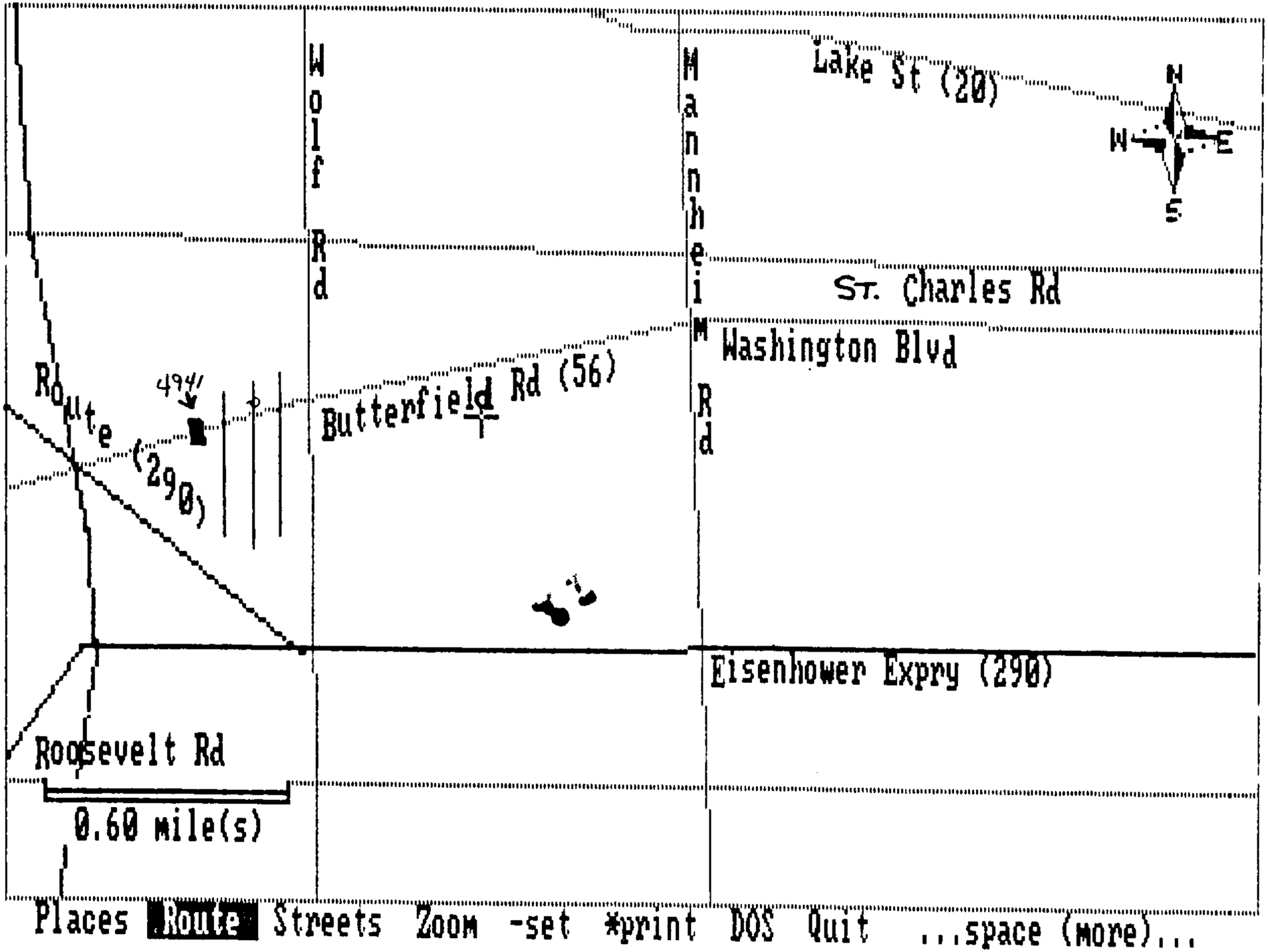
NEW BBS # 312 862-0182
NOTE: New meeting PLACE and DATE


Wolf Rd
Mannheim Rd
Lake St (20)
St. Charles Rd
Washington Blvd
Butterfield Rd (56)
Route (290)
4941
Eisenhower Expry (290)
Roosevelt Rd
0.60 mile(s)
N
W
E
S
Places Route Streets Zoom -set *print DOS Quit ...space (more)...

Where it's at this month..

Directions to new meeting place		Page 2
Membership News and Views	James Brooks	Page 2
Speeding up the 4A	Jim Derk	Page 3
Nick Speaks	Nick Iacovelli Jr	Page 4
Tech Talk	Mike Maksimik	Page 7
Type-in Program	Harold Weinrich	Page 10
Maling a Portable part 2	Jan Janowski	Page 11
Poem	Anonyamous	Page 12
Four A Talk	Bill Gaskill	Page 13
Minutes by Marcy	Marcy Brun	Page 17
Type-in Program CS1*FINDEX	Joe Bartles	Page 20
Cool Box (Hardware article)	Jerry Coffey	Page 22
Library Shelf	Bob Demeter	Page 25
Notes from the Editor	Bob Demeter	Back Cover

MEETING DATES

We are moving our meetings to the Broadview American Legion Hall 4941 Butterfield Rd. Hillside, Ill. The April meeting will be held on Saturday April 8, 1989. Please note this IS NOT the first but second Saturday of the month. The Executive board meets from 11 to 1. The regular meeting is from 1 to 3 pm. All are invited to attend. I am told that our May and June meetings may be held in Hillside too. The May meeting is tentively scheduled for Sat. May 6. The June meeting should be Saturday June 3rd. Please plan to attend. Please bring a TV if you can.

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DIRECTIONS -NEW MEETING PLACE

The Chicago TI User's Group will now hold it's meetings at the BROADVIEW AMERICAN LEGION HALL.

The new location is at 4941 Butterfield Road. Hillside, IL

From north or south, take I-294 to the Eisenhower Expy, eastbound.

Go to MANNHEIM road "NORTH" exit. This is the second exit once you get on the Eisenhower.

Take Mannheim to WASHINGTON BLVD....there is a jewel food store on the corner.

Turn left, (west) on WASHINGTON....go about 1 1/2 miles and you will pass WOLF RD.(stop lite).

Go about 3 1/2 blocks and the hall will be on the south side of the street.

MEMBERSHIP NEWS AND VIEWS

by James Brooks

Here we go again, starting off on the Spring Month, April. The club has grown to 1000 Members with 500 overseas! APRIL FOOL!! I just couldn't resist that bit of pun for the beginning of April. But getting down to the real business, those members that had not renewed their memberships by the last Newsletter know by now that they have been cut off at the Neck. We are not soliciting New members through the Micropendium this year but we intend to service the members that we have to the fullest degree.

The last meeting was well attended and the demonstration of the Group BBS was given by Nick Iacovelli. The New BBS number is (312)862-0182 and is now located in Calumet City,IL (A South surburban town in the Chicago Area) It is now being run by MIKE "Froggy" Malsimik. All members are encouraged to call the Group board for the latest Group information.

There has been a few changes of the great volunteer group that keep this Group going. For the latest list, call the Group's BBS at (312)862-0182. Also the Group meeting is to be held at a New meeting place, The American Legion Hall in Hillside. It was decided that since it is located close to an expressway, it would be accessable to more members than the Brickyard Mall (It did take a lot of city driving to get there) The directions are elswhere in this Newsletter. All members are urged to participate whenever possible. There is the program contest and the auction comming within the next couple of months.

At the meeting of March 4, we had one New member and several renewals. Others have come through the mail since. Last Month's Newsletter was the last for those that have not renewed by February 20. A few renewals came in after that date and they were sent out the March Issue along with their new card. Well that's enough for this month. See you at the April 8th Meeting instead of April Fools day which is on the First Saturday (our usual meeting time).

SPEEDING UP THE TI99/4A CONSOLE

by: Jim Derk

The idea of adding a speed up crystal to the TI console has been published before. I would like to give credit to the original author unfortunately I have never seen the original and was unable to locate a copy of that article. So I proceded to experiment on my own. I was told that the speed up crystal was a standard 14.31818 MHz crystal. Now you say great! I will just replace the old 12 MHz crystal with a 14.31818. Well there is one problem, any program that uses the RS232 card ROM DSR routines will not have the right timing. The RS232 card reads the clock speed from the console ROM to run its routines. So inorder to run any software that uses the RS232 card properly you have to install a SPDT switch between the two crystals so you can go back to normal speed for such programs.

1) Locate the 12 MHz crystal on the main circuit board in the console.

2) Carefully desolder this crystal.

3) Solder one lead from each crystal together, near the base of the crystal so a long lead from the new crstal is remaining to solder back to the main board.

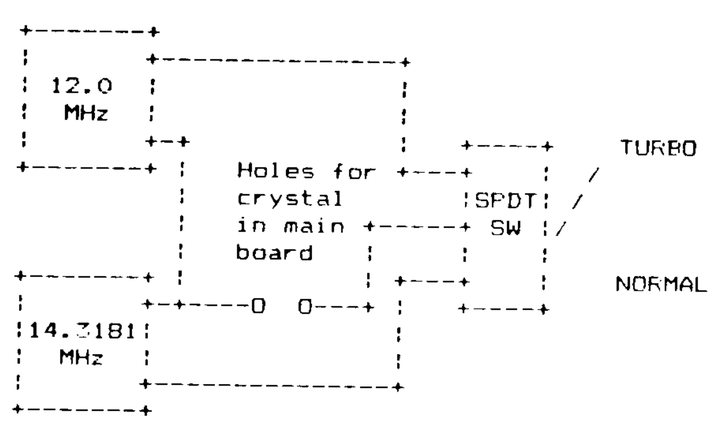
4) Now solder two lengths of wire to the remaining leads of the crystals.

5) Solder these leads to the outside posts of the SPDT switch. (single pole double throw switch)

6) Solder a wire from the middle post of the SPDT switch to one of the crystal holes in the main board.

7) Now solder the long lead from the connected crystals back to the main board.

8) Mount the switch on the back of the case.



NOTE: THIS AND ANY HARDWARE MODIFICATION IS AT YOUR OWN RISK. THIS IS A RELATIVELY SIMPLE MODIFICATION BUT IF YOU DON'T UNDERSTAND THIS PROJECT GET A FRIEND TO HELP.

This change seems to run all programs that don't use the RS232 card with an increase in speed of 20%. Your slow Basic and Extended Basic programs will really fly. I am contemplating changing the ROM's in the RS232 and TI consule so that the RS232 card will work correctly but that's another article.

NICK SPEAKS

Welcome to my LAST ARTICLE for the newsletter. Some of you can rejoice. Others can wonder if the newsletter is worth it or not. The newsletter will still be worth reading. I have kept the newsletter exchange program and will be sending Bob articles to be reprinted. Also doing the newsletter exchange will be JIM DERK. After I read it, he will go thru it and see if I missed anything that needs to be printed. My article will return in the Summer issue on the library exchange program (always look for help with it)

D.J. thanked people last month, now it's my turn. I'd like to thank the following people for their help on the library exchange program. Stanley Beyers and his helpers (took over 50 disk to catalog and document), Ernie Pergium and David Conerry (the first that offered to help and being so fast that I can't keep up). The rest of my helpers will be listed when I come back in Sept. I'd also like to thank the members that complain about my editorials. This made the group more responsive to it members. Now you can look forward to a more informative newsletters. Again thank you for your complaints and agreeing with what I said.

In the letter to the editor, Bob mentioned that my complaining may not mean anything. He may be right, but, like I said, it did drive the group to be more responsive (one of the goals I tried to achieve). He did not tell you I am also a KK (Klone Klown). Yes I own a IBM clone as do some of the exec board members. I also believe that the KK help keep the TI alive. The KK is looking for more add-on (software,hardware,etc) to keep the basic console going.

Dave Wakley mentioned in the contest about my creative spelling. Dave, I saw a tee-shirt that said "Six weeks ago I couldn't spell progrmair. Now I are one". Should I buy it?

Now on with important info.

The following is from Jerome Trinkl.
Assembly program image files first sector format.(these bytes are used by the loader)

BYTE	Include	
0-1	>FFFF	Header Tells loader another file to load. FAST1 FAST2
2-3	>xxxx	No of Bytes max. >2000 =33 sectors
4-5	>xxxx	Memory location to load those bytes.
6-7	>0460	Assembly Branch at Statement
8-9	>xxxx	Entry Address start of assembly program.

Basic Format

0-1	>xxxx	Exclusive Or of the next two words 2-3 and 4-5
2-3	>xxxx	Address of the end of line number table
4-5	>xxxx	Address of the start of line number table
6-7	>xxxx	Adress of the last memory location used in program.

Line number table info next 2 bytes.

8-9	>xxxx	Last line number in program
10-11	>xxxx	The start address of program

Then come the tokenize basic code.

STUFF WORTH MENTIONING:

MACFLIX - A program for the TI that will let you display Macintoish HI-RES pictures. req 32k and either XB, EA,or Writer. can save portion of the picture to Ti-Artist

Firstbase - database writen by Warren Agee, distibuted by Genial Computerware P.O. Box 183 Grafton Ma 01519 Features include subfiles,import and export from msdos and math funtions.

Graphic Expander- J Peter Hoddie Distributed by Genial Computerware, Graphic utility witten in 100% assembly language. Use to convert graphics from 1 format to another.

A small company name COMPRODINE released the following.

Picture IT - Allows you to use instances created in TI-ARTIST in your Ti-writer, great for some nice letter-head.

Form-Shop - Allows you to create forms using a modified ti-writer format

Jiffy Flyer- Program has one purpose. To print signs, flyers or whatever to announce meetings, rummage sales, candy sales, etc.

Contact Roger Merritt - Comprodine 1949 Evergreen Ave Fullerton CA 92635 for more information.

From John Guion 11923 Quincy Lane Dallas Tx. 75230

New set of ROMs for the TI-disk ctrl allows 4 drives and better naming??? $19.95

Upgrade TI RS232 to handle TP output to serial or parallels ports. $14.95

Mod for Triton Super-XBasic provides EA/Writer/DM3/ within the menu of this cartridge. $22.95

Forti Music card is still being sold in kit form for $65.00 for info call, Steve Tourto (516)242-1378

Space shuttle simulator - simulate flying a space shuttle (hey Dave, going to dump spad and blast off?) $15.00 from Steve Doran 382 Miral Drive #447 San Pedro Ca 90732

Xcom -a Basic/XBasic Compiler From DKM Enterprise P.O. BOX 501046 Indianapolis In 46250-1046 (see last month Bill Gaskell article for more info)

ZENO BOARD- 32K memory card, Battery back up clock, speech, XB and switchable selection grom. Assembly required. $15.00 or more. Send a SASE for info to Eric Zeno 414 Highland Rd. Pittsburgh PA 15235

Ryte Data products:

Technical Drive -detail information on TI-RS232 and Disk Crtl.
includes commented source code to it ROMS. $19.00

Command Dos - execute command from xbasic including format and copy.
Like mdos for the geneve but for the TI. $19.95

80 Track TI-EPROMS - upgrades the TI CRTL to use 80 track drive to
format for 1440 sector. $45.00

To order, Write Ryte DATA South 9221 Page Wood #304 Houston Tx 77063

From the Perth Austerralia user group. author Geoff Warner.

ARCHIVING is a concept which has become popular by MODEM use. It gives file xfer via the modem an easier,faster,more economical way to upload and download files and information. Files which formerly had to be sent individually (one at a time) can now be combined into one file using a different file name. No user standard has been set but a ( ) or the word ARC at the end of a filename could be a key to its type.
ARCED files are 2 main Type
dis/fix 128 denote simple arc
dis/int 128 denotes compressed

Barry Boone, whom I call the guru of archiving, has persued the dicipline to a point where he has come out with ARC V3.02.

Barry's program takes file and gives you the option to select and combine them into one file for transmission purpose. The latest program version also compress this file to take up less disk space and reduce on line time significatly. Understand, the arc program is not directly involved in the modem process. After downloading an arced file, the arc program will read decompress and restore the files to their original state for your use.

How can this apply to you? You dont even have a modem? Suppose you pick up a program from a friend or the library. Oh boy, you get home and fire it up. No luck, what's wrong? The filename sounds ok but it is d/f 128 or i/f 128 and one big file. Odds are you need to unarc it.

Ramdisk tip:

If you have a Horizon or Grand Ram ramdisk and use XB alot, here is a program that will allow you to jump to xb without having it check for DSK1. Put the program on your ramdisk and use the boot or root program to run it from the menu. Of course xb must be plugged in at the time.

```
100 !jump to xb
110 CALL INIT
120 CALL LOAD(-31952,255,0,255,0)
130 END
```

That's all, bye bye
Nick Iacovelli Jr.

Tech Talk
by Mike Maksimik

Last month an issue was raised about the validity of the TMS9995 being a true 16-bit processor. Well, take my word for it, it is. In fact, it is the pinnacle of innovation by TI in that it encompasses all that were hindrances on the TI99/4A. It essentially eliminates them, while adding some new features. Here is a basic rundown of the features.
The TMS9995 is compatible with the 9900 found in our 99/4A machines. The instruction set is upwardly compatible, that is, the 9995 has some more instructions that the 9900 does not currently support. The 9995 has internal RAM (256 bytes) which is on its internal 16 bit data bus, and is predecoded into its 64k memory space. The 99/4A has essentially the same, but the memory is external. The 9995 has an 8-bit external data path, exactly imitating the same function as the data bus converter in the 99/4A. This is for the sole purpose of interfacing to inexpensive 8-bit devices, such as memory, disk controllers, and any other device that uses a byte of data at a time. Otherwise, you would either have to make custom disk controllers for the 16-bit data path, or make data bus convertes for each and every device that you make for the machine, which is expensive, and is why the ps/2 and similar systems are not plug compatible with the pc-counterparts.
TI foresaw this trend, and stuck to the standard of interfcing with a byte of data. In fact, every computer you look at without custom device chips have such a standard. In the 9995, as in the 9900 with the data bus controller, any requests for direct memory access are denied during the byte/byte access to construct the 16-bit word internally. This is simply to allow the processor to complete the read/write before being interrupted or beng put on hold. In the 9995, when memory is being accessed, there is NO read-before-write like there is in the 9900(99/4A) so there is only one memory cycle, and not two, to do a write.
In addition, the 9995 has the ability for a user to program wait states into the processor, by using external circuitry. This allows ANY type of memory, from ultra-fast statis RAM to slow but cheap dynamic RAM to be used. In addition, any device that is memory mapped may us this feature. Imagine not having to conform to time dependent access of the VDP RAM or GROM by placing NOP's between memory access! The device itself can place the 9995 on wait state until the next byte is available. This "wait state" is really no wait state at all, since the 9995 is also a pipeline processor, meaning that there is an overlap in it's function. To describe this more clearly, imagine a car factory with one worker. This worker starts at the beginning, assembling a car little by little, until the job is finished. The worker only works on one job at a time, and can only make one car at a time. Now, imagine that same factory filled with workers on an assembly line, each doing a specific task. Each preparing the sub-automobile for the next worker/station in the assembly line, until eventually one car pops out. Compare the fist example to the second. In the first example, a car pops out after a thousand steps, and then another one a thousand steps later. In the second example, a car pops out after a thousand steps, but the next one pops out one step later. So, assuming workers work at about the same time, and each job takes the same amount of effort and time, then after two cars are made at the first factory, a thousand and one are made at the second factory! This is a throughput analog to the 9900 and the 9995. Plus, increase the speed of the throughput and provide no wait state RAM, and non-self modifying code, and the throughput becomes optimal. Perhaps a study of the acrual figures is needed, but I estimate that the most optimal code and memory in a 9995 system, such as the Geneve, the ACTUAL speed/throughput factor is NOT 12mhz/job, but in fact is would be about 2 times that, since the level

of pipeling is at least 2. This means to the programmer of top speeds of throughput that would rival a minicomputer! The 9900, and it's family, are in fact LSI (large scale integrated) versions of the 990 minicomputer. The 9995 also has a nice feature, called the macro instruction interrupt. A MACRO is a false-machine instruction which a computer does not understand, but has to be interpreted as another set of instructions. In some of the more primitive families of computers, a macro such as MPY for multiply would consist of many ADD instructions. In the 9995, the correct macro-assembler may be able to generate macro-instructions, and with the proper interrupt handling routine, may be able to interpret those instructions, allowing a great extension to the 9995 command set.
To all of you who don't quite follow, this means we can implement the 9995 as an 8086 simulator. It would be a quite simple task to interpret the 8086 instruction set into 9995, as both processors are high-level processors. With the memory scheme similar to the 8086, and a standard set of I/O calls, the 8086 would have total portability to the 9995. Future processors, it was planned, were to get these extensions burned into the microcode ROM, so there would be FAST upward compatibility. With a GENEVE running at 12 MHZ, this poses NO problem. Standardize the DOS and I/O calls, and standardize the memory, and then design an efficient MID interrupt handler, and you will have IBM PC compatibility on the GENEVE. IT IS THAT SIMPLE. The only complexities are changes in DOS, which can't be foreseen. The 9995 also has an event timer, or 2 user defined interrupts, which ever is preferred. A comparison to the 8088 by intel is to be made, eh? Well, the 8088 has some of the features of the 9995, but is does not have the internal RAM nor the MID interrupt feature. However, there are some similarities in the conception of both. The 9995 was a followup of the 9900, as a result of the 8-bit world, and a need for faster throghput. the 8088 was a result of an 8-bit world, which the 8086, a 16-bit external data bus processor, had trouble handling in the late 1970's. Perhaps the wave of the future will remain 8-bit devices. That is certainly where my schooling has headed. Some may argue Macintosh, or Amiga, or Atari ST, but they too have to interface with the outside world, or forever remain locked up tight to the tinkerer. I believe the GENEVE 9640 has great potential to be a great computer. Don't be fooled be a few individuals who have their own interests at stake. Remember, many of those in the TI community own PC's and would only like to see their new investment pay off. It would have been a wrong move for them if the GENEVE succeeds to it's full, unrealized potential. I can speak without bias, for I own neither, and I have studied both machines. I have neither PC nor Geneve interests at hand. I simply feel, as an educated computer scientist, that the Geneve is a more powerful computer. One may make tiny arguements about lack of software, or big-blue support, or x-machines sold, or incompatibility or what have you. But, the fact is the GENEVE contains a very powerful collection of processors. It was engineered in the mid 1980's, a near decade after the first pc's first appeared on the market. For programming purposes, I would choose the Geneve because of it's power and high potential. For practicality, I would still choose a Geneve because I would recover ALL of my invested time, research, and I would be furthering my education on the study of second-generation processors, not obsolete "standard" processors. There is much to do with the Geneve to make it popular and worthy of ownership. Some are looking for arcade games. Some are looking for a powerful CAD/CAM package. Still others are looking for serious number-crunching programs. For me, just give me a good macro asembler, and a year's supply of PEPSI, and I'll give you all some HELL!
Some interesting tidbits--you can access the printer directly (either PIO or RS232 based) without going through the DSR. If you know the

specifications your printer needs to print (baud rate, data bits, parity, etc.) you can do all of this in your assembly language program, a character at a time. With the RS232, use the TMS9902 reference manual to load the correct control registers, and loading the 9902 with data is just a LDCR instruction. With PIO, just turn on the RS232 card, send the data toaddress >5000, and then invert the strobe by first setting it to zero, and then to one. The byte will be be sent to the printer. This works great for a spooler or print queue. This also works for a TI RS232, or equivilent.
Rumour has it that MYARC will update the EPROM for the standard floppy controller (80 track) so that a file-by-file copy works. If you are copying file by file from one 80 track to another, or 40 to 80 track, do so at your own risk, or do it only 6 files at a time. The SYNC bytes on the disk at an arbitrary sector will be destroyed, and possibly the loss of half of your disk, and it wil have to be re-formatted and you will have to copy it over again. If you have a RAMdisk, copy the 80-track disk to the RAMdisk, and then copy the RAMdisk to the copy disk. Or, use Mike Dodd's M-copy. It works like a charm, and in less than 1/4 the time to copy.
Also, I would inquire if any of you have the manual for the TMS9919 sound generator. I would like a copy, since TI claims they no longer have any. Update on FDOS: I will have two versions available, soon, as fairware. The date for version 1.5 (supercart) will be after the programming contest, since it will be one of the entries. The second version (2.0) will be for the Chicago Ramdisk, and will be more advanced, although the object loaders will remain the same. Note that either one or the other device is necessary to operate FDOS, as I believe it is time to upgrade our systems to the modern age and give them memory they deserve. FDOS will provide the Chicago Ramdisk with the necessary routines for maintaining a RAMDISK of limitless size (in 1 or more disks of 360k each) plus a print spooler, a command line DOS with batch file processing and redirection of keyboard/CRT I/O. The DOS is designed with a BIOS for providing some standard routines that a programmer won't have to re-write, such as file handling, character I/O, interrupts and enhanced memory management. Both versions will contain the same BIOS, although the supercart version will provide minimal features expected of a DOS. All communication with the disk controller(s) is standard, using the defined specification in existence now. The DOS has a memory resident part and a disk-resident part. The disk resident part consists of the less-frequently used DOS commands, and command files (assemly language programs in either object code or program format), while the internal portion of DOS contains more frequently used commands, and the subroutines for handling character I/O and device DSR linking.
My spring break (March 17-26) gives me the opportunity to complete the DOS and beta-test it. Plase DON'T send me mail or requests for the DOS yet, as some of you have. I can certainly understand your anxiety for a DOS for the TI, but I am a full time college student and I have TONS of things to do, much less write letters on how DOS is coming along. I want to win one contest in my life, so it will hold until the contest at the meeting! Whether or not it wins any prize, it will be released as FAIRWARE. And, only those supporting me will recieve FREE updates to DOS, as future versions may or may not be released to the general public. I am hoping that this will provide a standard "shell" on which future pogrammers can base their programs. This eventualy translates to increased power and versatility to you, the users and programmers of the 99/4A.

Well, it's time to sleep, and I DO need some. I'll be here next month (hopefully!)

DIRECTORY — LOADER

By Harold Weinrich

```
1 ! BY HAROLD C. WEINRICH
2 ! THIS PROGRAM IS DIRECTORY, WITH INFORMATION OF PROGRAM AND LOADER.
3 ! YOUR DISKNAME IN PLACE OF (X-BASIC).
4 ! CALL PROGRAM BY (RUN"DSKn.LOAD")
5 ! CAN BE ADD TO VERY EASY.
6 ! AS EXAMPLE: I USED THE GROUP SAMPLE DISK.
7 ! SAVE UNDER NAME "LOAD".
8 ! YOU MAY DO AS YOU WISH WITH THIS.
9 !
100 CALL CLEAR
110 PRINT "1. BOWLING 1 to 4 player": :
120 PRINT "2. BREAKOUT game": :
130 PRINT "3. CRAZYCLIFF use joyst": :
140 PRINT "4. DEPTH game": :
150 PRINT "5. DISKJACK print sleeve": :
160 PRINT "6. DISKRUNNER catalog": :
170 PRINT "7. ERNIE & BERT comic": :
180 PRINT "8. GRAPHSHEET graphpaper": :
190 PRINT "9. CONTINUE": :
200 GOSUB 330
210 ON K-48 GOTO 380,390,400,410,420,430,440,450,220
220 PRINT "1. KEYBOARD artwork": :
230 PRINT "2. MISSLE game": :
240 PRINT "3. SCHMOO  game": :
250 PRINT "4. SETCOLXB ": :
260 PRINT "5. SKYRESCUE use joyst.": :
270 PRINT "6. TEXTTOPRO DV80 to program": :
280 PRINT "7. TV-TITLE vcr title maker": :
290 PRINT "8. WORDPROSS": :
300 PRINT "9. OVER AGAIN": :
310 GOSUB 330
320 ON K-48 GOTO 460,470,480,490,500,510,520,530,100
325 END
330 PRINT "CHOOSE A NUMBER"
340 CALL KEY(0,K,S):: IF S=0 THEN 340
350 IF K<48 OR K>57 THEN 340
360 CALL CLEAR
370 RETURN
380 RUN "DSK.X-BASIC.BOWLING"
390 RUN "DSK.X-BASIC.BREAKOUT"
400 RUN "DSK.X-BASIC.CRAZYCLIFF"
410 RUN "DSK.X-BASIC.DEPTH"
420 RUN "DSK.X-BASIC.DISKJACK"
430 RUN "DSK.X-BASIC.DISKRUNNER"
440 RUN "DSK.X-BASIC.ERNIE&BERT"
450 RUN "DSK.X-BASIC.GRAPHSHEET"
460 RUN "DSK.X-BASIC.KEYBOARD "
470 RUN "DSK.X-BASIC.MISSILE"
480 RUN "DSK.X-BASIC.SCHMOO"
490 RUN "DSK.X-BASIC.SETCOLXB"
500 RUN "DSK.X-BASIC.SKYRESCUE"
510 RUN "DSK.X-BASIC.TEXTTOPRO"
520 RUN "DSK.X-BASIC.TV-TITLE"
530 RUN "DSK.X-BASIC.WORDPROSS"
```


The Making of a portable
Part 2

Jan Janowski

At this point, I have an idea to build a Portable with a ramdisk. And, an idea where the ramdisk is going inside the console. I have even found a way to make it battery powered. But, at this point I still have more questions than answers.

In all honesty, I was unsure where to start first. I knew that if I did not plan my steps correctly, I could well find myself halfway done, and in a corner with no way to proceed. My biggest worry was that I would make a wiring error while I was in the testing stage and the computer would totally lock up. I would then not be able to do any troubleshooting or testing (a no-win situation.... locked up in testing, and unable to test because it is locked up). From that scary idea came the plan of attack that the "Expansion Board" had to be able to be disconnected from the computer. Then it could be tested separately. I decided on a "header plug". This would do the interconnecting of the wires from the grom socket and extra wires from the computer itself. That made sense. Make it easily separable for testing with wiring separate from the computer. I figured that this way the computer would also be less apt to be zapped by static electricity when disconnected from the "expansion board". The decision of the header meant that a wiring interconnect diagram had to be made. Then a schematic of the interconnect from the computer to the "expansion board" could be made. At first I thought 50 pins would be sufficient. But, after determining all the signals that needed to go to this board, it was quickly determined that 50 wasn't sufficient. So, the next higher number which would be easily available for flat wire cable was used -- 60 pins. The layout of the 60 pin header is as follows:

Pins 1 through 36 are identical to the grom connector.
37. U504 pin 14 (2000-3FFF)
38. U504 pin 10 (A000-BFFF)
39. U504 pin 9 (C000-DFFF)
40. U504 pin 7 (E000-FFFF)
41. U508 pin 9 (Not DBIN)
42. U510 pin 18 (A2)
43. U510 pin 16 (A1)
44. U510 pin 14 (A0)
45. U605 pin 3 (Not MEMEN)
46. U508 pin 6 (Not DLY RST)
47. pin 4 of I/O connector (Not EXT INT)
48. U510 pin 12 (Not phase 3 CLK)
49. U510 pin 3 (Not MBE)

50 through 60 not connected yet, for expansion!

In order to connect these remaining wires to the computer, an access hole had to be cut in the top metal cover of the computer adjacent to the slot where the grom connector plugs into the chassis. These 60 wires (eventually used a twisted ribbon cable and header plug.) are connected to the "expansion board" via the header plug. This is a dual row of 30 pins on .1" spacing for mounting on a piece of vector board that has solder pads on it. This way, I could easily connect, or disconnect the "expasion board" to and from the computer for testing.

Pins 37 thru 41 are used for the 32K expansion (more on that later). The remaining pins 42 to 49 are needed for the parallel interface (Via Kantronics Hamsoft firmware). Not knowing what I eventually would

need, I gave myself 11 spare connections, and they are taped inside the computer.

At this point, a grid was drawn up indicating how many different signals were going where. This determined if any one signal was going to be heavily loaded down. Because the address and data lines were going to be buffered on the ramdisk, it was decided that excessive loading would not occur (and it hasn't!)

Finally, I reached the starting point of the construction. The experimental console was torn apart, and the power supply modified with the type mentioned in the previous article (for use on 24VDC battery power). The connections were made to the computer board and the grom connector. The other end of the interconnect cable was fitted with a 60 pin header, and the entire cable was checked for continuity. Then the computer was tested to verify proper operaton and placed on the shelf to wait for the completion of the "expansion board". The supports directly behind the grom connector were cut away so that the wires from the grom connector to the expansion board would clear the plastic mounting assembly. The inside top cover of the console was modified so that the metal tabs from the trim would not short out the expansion board. Carefully, a piece of vector board with solder tabs on both sides was cut to fit inside the upper cover of the console. It sat snugly between the left side of the console to the grom connector mounting assembly. This ends up being approximately 5" by 9.75" with some cutouts and notches for the supports for the mounting screw supports. That is all the space I could fit inside the console! 5 by 9.75 inches! And on that I wanted to put a 512K ramdisk, 32K memory expansion, a parallel port, and leave room for expansion!
Now I stare down at a gutted black TI console and a blank expansion board with a 60 pin header laying on one side of the board. I push it from one side to the other. WHERE DO I PUT THINGS ON THIS BOARD?

End part 2

Poem

Some members keep a club so strong
while others join on just to belong
some dig right in some serve with pride
some go along just for a ride
some volunteer to do their share
while some lie back and just dont care
some always pay their dues ahead
some get behind for weeks instead
some do their best some build some make
some do neither but only take
some lag behind let things go
some never help their club grow
some drag some pull some don't some do
consider which of these are you.

anonyamous

FOUR-A/TALK

Random ramblings
about things TI.

by Bill Gaskill

March 1989

DISCOVERIES:

I received a call from Ed Edwards of the Cedar Valley 99ers in Cedar Rapids, Iowa the other night. Ed was calling on behalf of Jim Reiss, author of the excellent software program TYPEWRITER that is distributed by Asgard Software. The jist of the conversation involved Jim's concern over my comment in the January '89 Four-A/Talk article about TYPEWRITER not being compatible with any of the loaders I had except the E/A module. After some investigation and experimentation Ed and I discovered that the incompatibility occurred only when running Menu V6.4 on my Horizon Ram Disk. After installing JJ's V7.3 ROS, which I had simply been too lazy to do in the past, I discovered that TYPEWRITER worked flawlessly. So the message I would like to convey to all who read Four-A/Talk is that TYPEWRITER DOES work properly with all loaders available, including the John Johnson loader from the Horizon Ram Disk, FunnelWeb, E/A, Barry Boone's XB/EA loader etc. It does not work with the ROS that comes with Menu V6.4 for the Horizon Ram disk. Sorry Jim!

Along the same lines, I also received a letter from Chris Bobbitt of Asgard Software suggesting that the ROS may be the problem. But the real meat of the letter contained some interesting information about Jim Reiss and the future of his contributions to the 4A community. According to Chris, he met Jim on CompuServe some months ago and discovered that Jim, who is an under-graduate at Cornell University, was looking for a short project involving the TI-99. Since Chris had a few in mind the relationship was off and running. TYPEWRITER apparently is only the first (but hopefully not the last) Jim Reiss product that we will see. I also discovered from Chris' letter that TYPEWRITER will be available in module form shortly and will be introduced in the March 1989 Triton catalog. I hope that we provide the support needed to keep Jim and others with his kind of talent interested in writing for our community.

OTHER DISCOVERIES:

Jeff Bunting of the Roanoke Valley 99ers Box 12522 Roanoke, Va. 24012 has written an assembly language cryptogram solver that you may purchase for a $5 ShareWare fee. Jeff gives credit to Leonard Morgan Jr., Barry Traver and Wayne Stith for help with the project. I am not familiar with Leonard Morgan, but everyone knows who Barry Traver is of course and Wayne Stith is fast becoming another of the movers and shakers in the community. His KwikFont tutorial stands out as the best novice's introduction to assembly language programming I have ever seen, and now he has introduced TRIAD, the disk manager, text editor and telecommunications package rolled into one. The end result of the collaboration for the Cryptogram solver is a neat looking program. If you are a cryptogram buff, you need Jeff's offering.

Mike Wright, 45 Centerville Drive, Salem, New Hampshire 03079 has produced a booklet that is a must for every 99er. It is over 40 laser

prnted pages listing 99/4A books and their descriptions, disk, tape and module software produced by TI, the 1983 price list for 99/4A products before the bailout, information on the Valu-Paks TI offered and more. I picked up my copy at the Fest-West for $5.00. I would guess that you can order yours from Mike for $5.00 plus around $2.00 more to cover the cost of packaging and mailing. It is a superb $7.00 investment.

TI-BASE:

Alan Coleman of Cincinnati, Ohio, who does his computing on the 9640, wrote me a few weeks back asking for some help on a student grading program he was trying to write in TI-Base. The task that he wanted to accomplish was two-phased. First it involved entering five different grades in a record then summing them, dividing the results to get an average and then storing the average in a seperate field in the same record as the original five grades. The second part involved entering five quiz scores into a record along with two test scores. Alan then wanted the quiz scores summed and averaged and the results placed in a seperate field within the same record just as he did on the first part of the task. But then, the average of the five quizzes and the two test scores also had to be summed and averaged and the results of that computation written to a seperate field in the same record. It was a fun challenge that turned out quite nice. About a dozen TI-Base command files were used to create a menu-driven system to get the job done. Alan was quite pleased and was gracious enough to send me a few dollars for my time and effort, which I REALLY appreciated. Thanks Alan!

Anyway, out of the entire effort came a command file for TI-Base that builds a MENU that I thought I would share with you, since menus are always a useful tool in any computing environment. The file that follows is actually an abbreviated version done so to save space. But the concept and technique used are what's important. The menu can be expanded to include many more options.

In the MENU the CHOIRENT, CHOIRUPD, GMUSENT and GMUSUPD names listed after the DO statements are other TI-Base command files that are."RUN" by the menu. Each of those command files end with a RETURN that causes the MENU file to be re-RUN upon exiting any of the menu options. Any number keyed in that is outside of the valid options listed causes the MENU file to be executed again, so you can't make a mistake that will crash the file.

```
* menu
SET TALK OFF
SET RECNUM OFF
SET HEADING OFF
CLEAR
LOCAL A C 2
WHILE A <> "0"
CLEAR
WRITE 2,8  "    MAIN SYSTEM MENU"
WRITE 3,8  "    ----------------"
WRITE 5,8  "1 - Enter Choir data"
WRITE 6,8  "2 - Update Choir data"
WRITE 7,8  "3 - Enter Gmusic data"
WRITE 8,8  "4 - Update Gmusic data"
WRITE 9,8  "0 - Exit"
WRITE 19,6 "Selection Number:"
READSTRING 19,18 A
IF A = "0"
```



```
CLEAR
RETURN
ELSE
DOCASE
  CASE A="1"
    DO CHOIRENT
    BREAK
  CASE A="2"
    DO CHOIRUPD
    BREAK
  CASE A="3"
    DO GMUSENT
    BREAK
  CASE A="4"
    DO GMUSUPD
    BREAK
  CASE 1=1
    REPLACE A WITH "X"
    BREAK
  ENDCASE
  IF A<>"X"
  CLEAR
  ENDIF
ENDIF
ENDWHILE
RETURN
```

FEST-WEST '89:

I spent a weekend in San Diego February 18-19 at the beautiful Clarion Hotel, meeting scads of neat people at the 1989 version of Fest-West. What a great time! If you have never been to any of the major TI faires like the TICOFF in New Jersey, the Chicago Faire in Illinois or the Fest-West which is always somewhere in the western states each year, you really should go to one. Aside from the fabulous products and seminars available, you will usually rub shoulders with most of the movers and shakers in the TI community. Many of them were in attendance at Fest-West '89. Regena, Barry Traver, Steve Mehr and Roger Merritt from Comprodine, Terrie Masters and Fred Moore from the LA Users Group, Jerry Price from Tex Comp, Tom Freeman and Jim Lohmeyer from T and J Software, Rich Carroll from DIJIT, Mike Wright representing Peter Hoddie's Genial Computerware, John McDermott from Rave99, Ray Kazmer of WoodStock fame, T.A.P.E. with their innovative mouse system and other goodies for the 99 was there as were B.J. and Jack Mathis from the SouthWest 99ers in Tucson. The Mathis family members were featured in the December 1988 edition of PC Computing magazine in a marvelous article about orphaned computers entitled "Gone But Not Forgotten".

As an information item for you PR BASE V2.1 users, Jack Mathis has re-written the PR BASE utilities programs by John Johnson to work with the Mike Dodd V2.1 version. If you are interested in procuring a copy write to Jack care of the Southwest 99ers, Box 17831 Tucson, Az. 85730. Jack is an up and coming assembly language programmer who I hope to hear more from in the future.

I never asked about the actual attendance figures, but I can reasonably say that attendance was well into the hundreds. It was so neat to be apart of it all. Fest coordinator Woody Wilson even let me give a seminar on TI-Base on Saturday afternoon. Other seminars were given by

Regena, Barry Traver and Woody himself. The Fest was sponsored this year by the Southern California Computer Group, Box 21181 El Cajon, Ca. 92021. Thanks to the ladies and gentlemen of the SCCG for their hard work and excellent organization. It was a GREAT event! There is talk already of Fest-West '90 taking place in Tucson. I hope so. I've never been to Tucson and I can't think of a better excuse to go than a TI Faire.

COMPRODINE:

Comprodine is an acronym for COMputer PROgrammers DIstribution NEtwork. The firm is owned by Rodger Merritt and Steve Mehr. Thanks to the programming wizardry of Rodger and the marketing where-with-all of Steve, the company offers some of the neatest graphics oriented software ever produced for the 99/4A. Besides the PRINT-IT program I already own from them, I was able to pick up Form Shop, Jiffy Card and Jiffy Flyer. If you ever need to produce professional printed material for any purpose, Comprodine is the company to contact. If you are a Computer Shopper subscriber you can read all about Form Shop in the February 1989 edition in the TI Forum column authored by Barry Traver. Comprodine's address is 1949 Evergreen Ave., Fullerton, Cal. 92635.

TRIVIA:

Talk about off-the-wall trivia! Did you know that California Dreamers Inc., Chicago, Illinois 60610, produced a beautiful greeting card that features the beige version of the 99/4A console on the front of the card, with a message inside the card that reads, "I'd love to program your software"? Unreal! The layout was designed by Jim Lienhart, who may be a 99er, but it is not a name that I have ever seen anywhere. The card is copyrighted 1984, which means it was done after the "bailout" by TI. Wonder why he chose our machine? Glad he did at any rate.

MICROdex for TI-Base:

In the January '89 Four-A/TALK I introduced the MICROdex program and data base for publications referencing. This time I am going to tell you about MICROdex for TI-Base.

Because I find TI-Base to be the most powerful and flexible data base management system available for the TI, and because there are over 1000 copies of it out there in the community already, I have written the MICROdex library files in TI-Base format. This means that TI-Base owners can now have access to the thousands of indexed items that are found in the MICROdex libraries. The MICROdex for TI-Base system contains TI-99/4A indexes for 99er/Home Computer Magazine, Compute! magazine, MICROpendium and miscellaneous files for Enthusiast 99, Super 99 Monthly, The Smart Programmer and others.

MICROdex for TI-Base is entirely menu driven with no command file programming required. It performs some of the fastest searches available in any 99/4A data base and supports both displayed and printed output. If you have ever read something on the 99/4A or Geneve and wanted to find it again, this is the tool for you. Aside from being an excellent reference library, it also gives you a host of TI-Base command file examples that you can modify for other uses. MICROdex for TI-Base will be available through Texaments in the next couple of weeks. Look for it.

NEXT MONTH: Myarc's HFDC card is discussed. Until then...

MINUTES BY MARCY

The Executive Board Meeting of March 4, 1989 was brought to order at 11:30 am.

-----Ernie Pergrem gave a suggestion of making a booklet like the Hardware Manual only smaller, perhaps 20 to 25 pages. This would consist of articles from other users groups that are not copy righted. These would be general articles that pertain to TI Writer. If this project goes well, maybe at a later time, he would get together a booklet that would contain articles pertaining to another specific subject. The discussion followed that it was a good idea and Ernie plans on doing the work for this project. It was voted and passed to allow him $50 for the cost of printing for this project at this time.

-----There was then a discussion on the bulletin board. Mike Maksimik will be taking on the job of the Bulletin Board Sysop. He will be at the meetings, however he may arrive late. We would like to get some type of promotions on the bulletin board to get people to call more offen. The new phone number for the bulletin board is 312-862-0182 and it will be up and running as of March 6th.

-----Smith Kealer School for the mentally and physically handicapped has asked us to announce that they are looking for donations of computers to be used for teaching. If you would like to make a donation, please leave Sandy Bartels a message on the bulletin board or write to our P.O. Box.

Ernie Pergrem is our Educational Chairman. His job is to find educational programs and put them into our library. Since he is a member of the L.A. users group and they have an educational library of about 50 disks, his first task is to propose to do a disk swap with them. One disk from their educational library for one disk from our library.

Oscar Brentana stated that he used to work for Scott Forestman Co. and he will write a letter to them asking if they would release the rights on their educational programs.

-----Bob Demeter has improved the last newsletter and said that he will make it a first class newsletter from now on.

-----Don Jones has received a bill from Altschuler Glasser for $600. It was recalled that Len Rovner had approval of up to $500 for the work to be done on our taxes and the non-profit organization status and our By-Laws. The motion was passed that we pay the $600 bill for these accounting fees.

-----Don Crabb is the reporter that had written an article in the Chicago Times newpaper stating that there was no back up for TI home computers. Don Jones had written him a letter explaining to him about all the groups around the nation. Don has suggested that we send Mr. Crabb a newsletter every month. This motion was voted and passed.

-----Mark Harms is the Chairman in charge of attending other computer shows and giving our group exposure at them. Don will talk to Mark to find out what shows he has been going to and how he feels the results have been. If you know of any shows or fairs that have computer groups or companies exhibiting in them, please drop a message to Mark Harms through our P.O. Box.

Sandy will ask H H Computer Supplies to put out flyers about our meetings and our Faire on his table when he attends any computer shows.

-----Hank Ellermann has brought back the groups Geneve computer and there was a discussion on what we should do with it now. It was decided that it would be used as a loaner if anyone would like to borrow it for a while to see how it is and then they could bring it back after a month or so. It will also be used for demonstrations at the meetings.

-----Don has contacted Sister Pat who is in a nursing home and is trying to promote TI computers in the nursing home to be used by the elderly. Don would like to propose to making Sister Pat a life time membership of our group which will include sending her a newsletter every month and give her access to our library. Sandy would like to propose giving her a $50 gift certificate for our library. After a discussion, this motion was voted and passed.

-----Last months minutes were in the newsletter and accepted.

-----Bob Demeter will be giving up the library. Lionel Bordelon, Tom Niemczyk and Donald Logan will be running the library. However, you can still send the library orders to Bob Demeter's P.O.Box.

Bob now has the new library catalog printed. This means that we now have a volume 1 and volume 2 for the library catalogs. Don and another volunteer will be working on sending out the new library catalogs to persons who renewed non-attending memberships in 1988 and have not at this point received a library catalog.

-----As of March 3rd, we have 355 paid 1989 members. 18 members have paid up to the year 1990. At this point, there are 214 previous members who have not paid for 1989. The Membership Chairman, Jim Brooks, did get a lot of mail today which he has not gone through yet. We also have 52 brand new members at this time. Jim has noticed that most of the people who have not renewed are people that are out of town.

There was a discussion that at this time we are not activily pursueing new membership. However, next year we will probably activily work on a membership drive.

-----Todays meeting will be dealing with communications. Nick will demonstrate the bulletin board and TELCO.

At the April meeting there will possibly be a demonstration by Jan Janowski of his TI portable computer. If this is not possible, we will have a question and answer session.

The May meeting will be our annual programing contest, which will be the announcement of the winners and they will demonstrate their programs. If you have any self made programs to submit, please send them to our P.O. Box stating that they are for the programing contest. Cash prizes will be awarded.

The June meeting will be our annual auction. If you have any hardware or software to donate, please bring it to the June meeting.

-----Sandy Bartels, Marcy Brun and Christine Chambers will have a meeting with the people at the Holiday Inn Rolling Meadows regarding our 1989 TI Fair Convention before our April meeting. They will go

over all the details and make all the arrangements. At this point the hotel is holding all the rooms for us for the first weekend in November. There have not been any contracts signed or deposits made as of yet. Marcy would like to give the hotel a $600 deposit when they have their meeting. This motion was voted and passed.

-----Since Len Rovner has not been able to make the meetings lately, we would like to request from Len a financial report on the 1988 TI Faire. Don said that he will talk to Len and present it next month.

Oscar Brentana, our new Treasurer, has received all the paperwork from Len to transfer the treasury job to him. He stated that he has to get together with Len again to clarify some of the information. Oscar feels that he should at least prepare a quarterly financial statement and present it to the Executive Board Members.

-----Last month 69 members came to the meeting. The attendance for the meetings has gone down. There was a discussion on moving the meetings to another location. The American Legion Hall that Chuck Levitt had check into was a nice place and close to the expressway. It had enough parking for everyone. It will cost us $60 a month to hold the meetings there.

Triton College is now projecting that their building should be completed in June of 1990. Hank also announced that next month, April, we will not be able to meet in the Brickyard. He said that if we decide to leave the Brickyard, we will be able to come back unless another group commits for the same time table.

It was suggested that since we can't meet at the Brickyard in April, we will hold the April meeting at the American Legion Hall in Hillside and stay there until our summer vacation. Perhaps this locations will bring back more of the members. Since we have to pay $60 for the hall, there will be a donation box at the entrance to help pay for the hall. James Brooks volunteered to send a postcard out to all area members about the new meeting location. This will include directions the the American Legion hall in Hillside. There was a motion on the floor to move the meeting place temporarily to the American Legion Hall and a motion to send this announcement to the members. This motion was voted and passed.

Because of the hall having another committment on the first Saturday of April, our meeting will also be rescheduled to the second Saturday in April. This is April 8th. This will be included on the postcard which James will send out to everyone in the Chicagoland area whether they have been attending the meetings or not. James has been authorized to spend up to $40 for the postcards and postage. We will also have these announcements on the bulletin boards and in the newsletter.

Therefore, the April meeting will be held on April 8th, which is the second Saturday of the month. It will be held at the American Legion Hall in Hillside. This is located at Butterfield Rd and two blocks west of Wolf Rd., just off the Eisenhower Expressway.

-----There was a discussion on the club donating Micropendiums to libraries and having a sticker put on it saying that it was donated by the Chicago Area TI Users Group with information to contact us if interested in the group. A motion was voted and passed that Don should receive $100 to get five subscriptions of Micropendium for five libraries in different areas of Chicagoland. He will keep track of the

progress of this project to report the results.

-----It was suggest to put a flyer in our newsletter for members to pull out and put up in a store in their area. This flyer will give information about our group and meeting time and place.

-----Sam Pincus made up cards to be used for volunteer incentive. When someone volunteers to do a project, the card will get punched. When the card if filled they can get disks from the library.

-----Since Chuck has taken on the job of the Hardware Manual, he has sent out 93 Hardware Manuals. He presented a list to Don of who the manual has been mailed to. Chuck mentioned that we have enough data at this time to start making a Hardware Manual Volume 2.

-----Our subscription for Computer Shopper is up for renewal at this time. There was a vote as to whether we should renew the subscription or not. It was voted that we will not renew our subscription at $26.

The Executive Board Meeting was adjourned at 1:05 pm.

The General Membership Meeting was then opened. All items from above were announced to the general members.

-----There was a demonstration by Nick of how to use the group's bulletin board and also another demonstration on TELCO.

The General Membership Meeting was adjourned at 3:00 pm.

Before and after the General Membership Meetings, members and computer businesses are allowed to set up tables to sell merchandise. If you have anything you would like to sell, please feel free to participate. If you are looking for TI hardware or software, please feel welcome to come to the meetings and shop around.

Submitted by: Marcy Brun, Secretary.

CS1*FINDEX

```
50 REM CS1!FINDEX                (105)
60 REM TI BASIC                  (217)
65 REM FAIRWARE. If you like
 this progrm please send a
 donation to JOSEPH E. BARTLE
 at the address below. (103)
80 REM 16 SAE TRAILOR CT
                                 (243)
100 REM PARISH,MY 13131
                                 (109)
110 REM  315-625-4409            (59)
112 REM Originally written 1
983, revised 1985                (43)
115 REM Minor modifications
by Charles Good, DEC 88.
                                 (164)
117 REM Remove line 190, and
all REM lines including 1765
 to fit into A!B!MEMORY
                                 (215)
120 CALL CLEAR                   (209)
130 _0="_________"               (136)
140 C$="CATALOG"                 (238)
150 LC$="LOCATION SEARCH"
                                 (118)
160 DEF LF=LEN(F$)               (133)
170 T=1000                       (159)
180 DIM P$$(19)                  (230)
190 DISPLAY TAB(6);"CASSETTE
 FINDER": :TAB(6);"Joseph E
Bartle": : : : : : : : : :
                                 (132)
200 GOSUB 1900                   (195)
210 CALL CLEAR                   (209)
220 PRINT LC$&" Y/N"             (208)
230 INPUT AN$                    (69)
240 IF AN$="Y" THEN 1500
                                 (112)
250 DISPLAY                      (162)
260 PRINT "DOES TAPE HAVE ";
C$                               (102)
270 INPUT AN$                    (69)
280 IF AN$()"Y" THEN 470
                                 (39)
290 GOSUB 1320                   (125)
300 GOSUB 740                    (54)
310 CALL CLEAR                   (209)
320 @ESTORE 1930                 (238)
330 NI=10                        (135)
340 GOSUB 1040                   (135)
350 CALL KEY(0,OP,S)             (15)
360 IF (OP(49)+(OP)53)THEN 3
50 ELSE 390                      (238)
370 IF S=0 THEN 350              (102)
380 T=1000                       (159)
390 ON OP-48 GOTO 400,470,62
0,680,710                        (185)
400 CALL CLEAR                   (209)
410 DISPLAY TAB(8);LC$; : :
: : : : : : :                    (133)
420 GOSUB 1900                   (195)
430 GOSUB 830                    (145)
440 GOSUB 1790                   (84)
450 IF C<0 THEN 310              (46)
460 GOSUB 1520                   (69)
470 CALL CLEAR                   (209)
480 DISPLAY TAB(8);"NEW "&C$
: : : : : : : : :                (17)
490 FOR R=1 TO 20                (97)
500 F$=F$&_$                     (205)
510 NEXT R                       (214)
520 FF$=F$                       (216)
530 GOSUB 740                    (54)
540 GOSUB 1900                   (195)
550 OP=50                        (140)
560 GOSUB 1360                   (165)
570 GOSUB 830                    (145)
```

NEXT PAGE


```
580 GOSUB 1090                   (150)
590 GOSUB 800                    (115)
600 GOSUB 1260                   (64)
610 GOTO 310                     (134)
620 CALL CLEAR                   (209)
630 DISPLAY TAB(8);"CHANGE "
&C$: : : : : : : : : :           (133)
640 GOSUB 1900                   (195)
650 GOSUB 830                    (145)
660 GOSUB 1090                   (150)
670 GOSUB 1360                   (165)
680 GOSUB 800                    (115)
690 GOSUB 1260                   (64)
700 GOTO 310                     (134)
710 CALL CLEAR                   (209)
720 DISPLAY "@1983,@1984,@19
85"                              (20)
730 STOP                         (152)
740 CALL CLEAR                   (209)
750 FOR I=0 TO 19                (113)
760 P$$(I)=SEG$(F$,I@12+1,12
)                                (101)
770 IF (SEG$(P$$(I),1,1)=" "
)+(SEG$(P$$(I),1,1)="")THEN
790                              (252)
780 NEXT I                       (223)
790 RETURN                       (136)
800 INPUT "PRINTOUT? (=Y/0=N
":I0                             (76)
810 IF I0=0 THEN 830             (141)
820 OPEN @10:"PIO"               (155)
830 CALL CLEAR                   (209)
840 PRINT @10:TAB(9);C$:TAB(
4);"NUM ";TAB(12);"PROGRAMS"
                                 (70)
850 FOR I=0 TO 19                (113)
860 IF I)09 THEN 920             (212)
870 IF I)08 THEN 900             (191)
880 PRINT @10:TAB(5);I+1;"^
";P$$(I)                         (69)
890 GOTO 930                     (244)
900 PRINT @10:TAB(4);I+1;"^
";P$$(I):TAB(12);"REMARKS"
                                 (72)
910 GOTO 930                     (244)
920 PRINT @10:TAB(4);I+1;"R
";P$$(I)                         (24)
930 NEXT I                       (223)
950 IF I0=0 THEN 980             (35)
960 CLOSE @10                    (53)
970 I0=0                         (79)
980 RETURN                       (136)
990 CALL CLEAR                   (209)
1000 DISPLAY :" TO END CATAL
OG PRESS ENTER.": :" PROGRAM
 NAME "LIMIT 12 CHR"             (105)
1010 DISPLAY :"OLD NAME/REMA
";I+1;P$$(I): :                  (200)
1020 INPUT "                     "
:N$                              (131)
1030 IF LEN(N$)>12 THEN 1040
 ELSE 1070                       (46)
1040 CALL CLEAR                  (209)
1050 DISPLAY "REDO !"            (218)
1060 GOTO 1020                   (78)
1070 F$$=N$&SEG$(_$,1,12-LEN
(N$))                            (112)
1080 RETURN                      (136)
1090 INPUT "CHANGE? Y/N ":CH
$                                (196)
1100 IF CH$()"Y" THEN 1250
                                 (50)
1105 OP=5;                       (141)
1110 DISPLAY                     (162)
1120 INPUT "NUMBER OF REMARK
          0 FOR NONE ":I
                                 (5)
1130 IF (I)10)!((I(2)THEN 11
90 ELSE 1150                     (121)
1140 DISPLAY                     (162)
1150 INPUT "NUMBER OF PROGRA
M          0 TO QUIT ":I
                                 (9)
1160 IF I=0 THEN 1250            (227)
1180 IF I)20 THEN 1250           (24)
1190 I=I-1                       (12)
1200 GOSUB 990                   (49)
1210 P$$(I)=F$$                  (236)
1220 DISPLAY                     (162)
1230 INPUT "MORE Y/N ":CH$
                                 (15)
1240 IF CH$="Y" THEN 1120
                                 (239)
1245 GOSUB 1360                  (165)
1250 RETURN                      (136)
1260 INPUT "SAVE Y/N ":AN$
                                 (15)
1270 IF AN$()"Y" THEN 310
                                 (135)
1280 OPEN @4:"CS1",INTERNAL,
OUTPUT,FIXED 192                 (69)
1290 PRINT @4:F$$                (102)
1292 PRINT @4:N$                 (103)
1300 CLOSE @4                    (154)
1310 RETURN                      (136)
1320 OPEN @3:"CS1",INTERNAL,
INPUT ,FIXED 192                 (223)
1330 INPUT @3:F$$                (171)
1332 INPUT @3:N$                 (172)
1334 F$=F$$&N$                   (183)
1340 CLOSE @3                    (153)
1350 RETURN                      (136)
1360 F$=""                       (239)
1370 FOR I=0 TO 19               (113)
1380 IF DP()50 THEN 1420
                                 (219)
1390 GOSUB 990                   (49)
1400 P$$(I)=F$$                  (236)
1410 IF SEG$(P$$(I),2,1)=" "
 THEN 1480                       (192)
1420 F$=F$&P$$(I)                (187)
1430 IF (L$="N")+(DP=50)+(DP
=51)THEN 1460                    (220)
1440 I=I+1                       (11)
1450 IF I)19 THEN 660            (200)
1460 IF (L$="Y")+(DP=52)THEN
 1480                            (66)
1470 NEXT I                      (223)
1480 F$=F$&SEG$(FF$,LF+1,240
-LF)                             (187)
1482 G$=SEG$(F$,1,180)           (156)
1484 H$=SEG$(F$,181,180)
                                 (8)
1490 RETURN                      (134)
1500 INPUT "LOCATION 1-10 ":
N                                (193)
1510 N=N-1                       (20)
1520 CALL CLEAR                  (209)
1530 FOR CC=2 TO 7               (124)
1540 CALL COLOR(CC,1,1)
                                 (54)
1550 NEXT CC                     (28)
1560 CALL SCREEN(2)              (147)
1570 RESTORE 1980                (32)
1580 NI=20                       (128)
1590 GOSUB 1840                  (135)
1600 CALL SCREEN(15)             (200)
1610 CALL KEY(0,KE,ST)           (84)
1615 IF ST=0 THEN 1610           (171)
1620 CALL HCHAR(18,1,31,192)
                                 (24)
1624 CALL SCREEN(13)             (198)
1630 OPEN #2:"CS1",DISPLAY ,
OUTPUT,FIXED 192                 (240)
1650 FOR I=0 TO N                (138)
1660 IF I<>N THEN 1680           (168)
1670 CALL SCREEN(11)             (196)
1680 PRINT #2:I                  (146)
1690 NEXT I                      (223)
1700 CALL SCREEN(9)              (154)
1710 CLOSE #2                    (152)
1720 CALL CLEAR                  (209)
1730 FOR CC=2 TO 7               (124)
1740 CALL COLOR(CC,2,1)
                                 (55)
1750 NEXT CC                     (28)
1760 DISPLAY "PGM. LOCATED":
 : :P$$(I-1): : :"DO NOT REM
IND !": : :"ENTER OLD OR SAV
E CS1": : :"CON TO CONTINUE"
: : : :                          (18)
1765 REM Change 1770 to RUN
'CS1' for extended basic aut
oload                            (165)
1770 BREAK                       (142)
1780 GOTO 310                    (134)
1790 INPUT "RUN 1-10 OR ""0"
" TO EXIT ":C                    (202)
1810 IF (C<0)+(C)13)THEN 180
0                                (211)
1820 R=C-1                       (10)
1830 RETURN                      (136)
1840 CALL CLEAR                  (209)
1850 FOR R=1 TO NI               (221)
1860 READ A$                     (252)
1870 DISPLAY TAB(3);A$           (32)
1880 NEXT R                      (232)
1890 RETURN                      (136)
1900 CALL SOUND(1,110,30)
                                 (165)
1910 CALL SOUND(1,111,30)
                                 (75)
1920 RETURN                      (136)
1930 DATA !!!!!!!!!!!!!!!!!!
!!!!!!,!
  0,$     OPTION L!B1     $
,$                               J
                                 (45)
1940 DATA !!!!!!!!!!!!!!!!!!
!!!!!!,$
  1,$     1. SEARCH       $
,$     2. NEW            $
                                 (23)
1950 DATA $     3. CHANGE
     1,$     4. PRINT
  $,$     5. DONE          $
                                 (108)
1960 DATA $
     $,$
  $,"$  ENTER 1,2,3,4 OR 5
$",$                             $
                                 (61)
1970 DATA !!!!!!!!!!!!!!!!!!
!!!!!!,,
                                 (201)
1980 DATA ,first beep rewind
 tape,'then push enter',,,se
cond beep push fast fwd,'the
n enter',,                       (115)
1990 DATA third beep push st
op,'then enter',,,,,,,,,pres
s any key to continue.           (163)
```

DONE

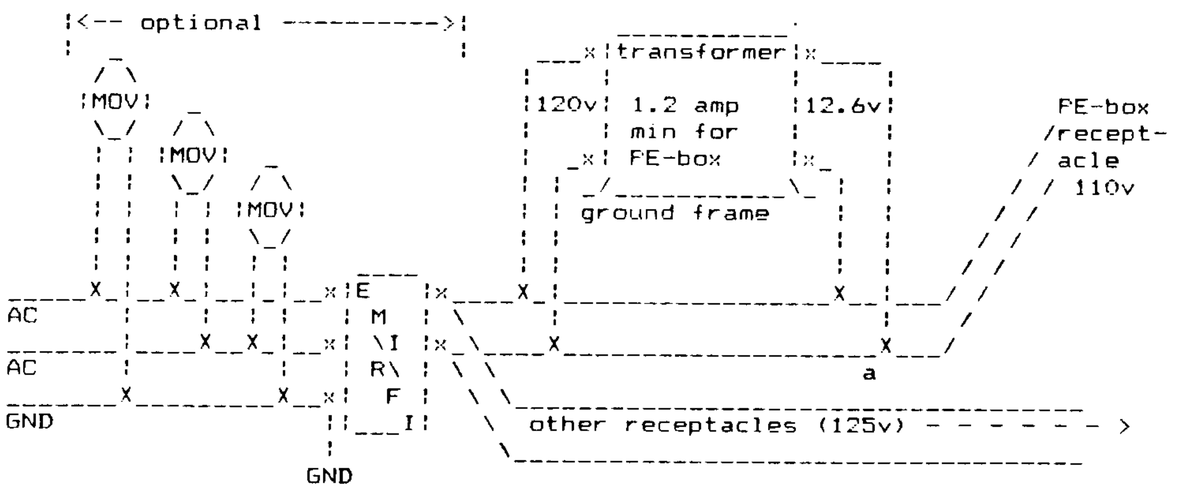
COOLER BOX Jerry Coffey June 1987

Because of some of the discussion on Bob and Bill's BBS about excess voltage and overheating, I thought I would pass on my fix for excess voltage from the P-box power supply. (I did this a while back when I got tired of scraping fried heatsink compound off the cards every few months).

I built a gadget with about $5 worth of parts to drop the local line voltage from 125 down to 110 volts. TI designed the supply to have a voltage reserve at 110 to accomodate the range of line voltages available. But at the typical 117-125 voltages, this means the on-card regulators have to dissipate 20-30% more heat than necessary. The gadget uses a 12 volt 2 amp transformer to feedback part of the line voltage with polarity reversed (actually "phase reversed" if you want to get picky).
-- VOILA! 125vac --> 110vac (more or less)

CB radio fans may recognize this as the reverse of the device some of us used to "peak" the line voltage to get a little extra range out of a legal transmitter.

I set mine up as an extension cord with a multiple outlet box at the end. The transformer (and any other gismos such as MOVs or EMI/RFI filters) fit into the box along with the AC receptacles. The bulk of the transformer determines the size of the box. It looks something like this:



GROUND ALL receptacles

Test the voltage at the PE-box receptacle when wiring is complete. If it shows 140v, then the transformer is IN Phase and the two connections at a must be swapped. The "12.6v" transformer actually puts out about 14v when fed from a 125 volt line.

I have used this mod with six cards in the PE-box and lately with the GENEVE and two cards (plus two TEAC 55Bs of course). It ended my overheating problems and should extend the life of the cards. It even seems to have quieted down my fan (running slower I suppose). Either that or the constant fan noise has finally impaired my hearing.

libtaty shelf

— Bob Deneter —

Happy Spring!!! Happy April Fools!!?? Welcome to the new Libyan Shelf article. Welcome to the All New PC TImes Newsletter. And who the heck is Bill Cosby???? Is he the guy I heard about that spilled Jello in his TI? I heard him and Lou Phillips were just recently on the cover of People. They were being billed as a new comedy team. Bill is the straight man. Lou tells these wildy crazy tales about this new computer. A regular riot. Nuf said about that. Guess you'll just have to buy the book to hear more about it.
Of course you know this is all April Fools B.S. My one day of the year to be myself. Besides, the front cover didn't mention the name of the group that folded. You great detectives summized that. I hope no one gets angry about me picking on Lou Phillips. I do consider him a good friend. He and I have done a lot of favors for each other over the years. I have a lot of respect for him and wish him nothing but the best. I am a big Myarc dealer and friends have refered to me as Mr. Myarc.
And just when you thought you were through putting up with me, here I am again. Yes I know I said all my good byes last month. But I missed you all so much. Matter of fact, I did get a few letters saying they would miss me. The check's in the mail, guys.
Lionel and I haven't met to turn things over to him yet. I also had a lot of things going. I didn't want to start him off with all kinds of things hanging. This past month, I added 21 new disks to the library. Throwing all this in Lionel's lap just wouldn't be fair. So, I'll do this article and one other before I take a back seat. Why one other? I thought you'd never ask. It's simple. I don't have time or knowledge to review them all here today. Some of them I haven't run yet. So, I can't do a review. So guess what you get to read from me next month? Yep, my final reviews.
All disks and programs I'll mention here are in the library. Tom will have them at the next meeting. We spent last Sat. finalizing how we were going to combine them onto disks and what we would charge. We have come up with some very liberal prices. I hope you'll all be happy with what we have done. There are some very nice programs here. I hope you'll all be able to enjoy them.
OK, enough with the jibber. Let's get on with the real reason we're here. If elected I promise to put a little pot in every chicken. Hey wait a minute. That came out all wrong. Wrong article too. Ah but what do you expect. Everybody in the club knows who I am. I'm the guy with the hat that has the bells hanging from it. There's usually two pictures of me in every new deck of cards. You usually throw them out. OK, enough fun. Boy I'm gonna miss this. How about a review?

How about something new from Myarc? I have some very nice things for the 9640 owners out there. How about Advanced Basic? How about GPL 1.04? How about My Word 1.22? How about Pascal Run Time? Sorry, no got. I do however have all the rest. My good friend Ron Paswinski has been keeping an eye on Genie for me. One day he walks up to me and says, "How'd ya like to have Abasic and a few others?" Of course you all know I said no. That night while I was working, Ron was uploading files to my BBS. ABASIC was one of them. There was a note that came with it saying it had bugs but another would be uploaded soon. Well, the other night on Delphi, guess what was there? Yep, the newest Advanced Basic

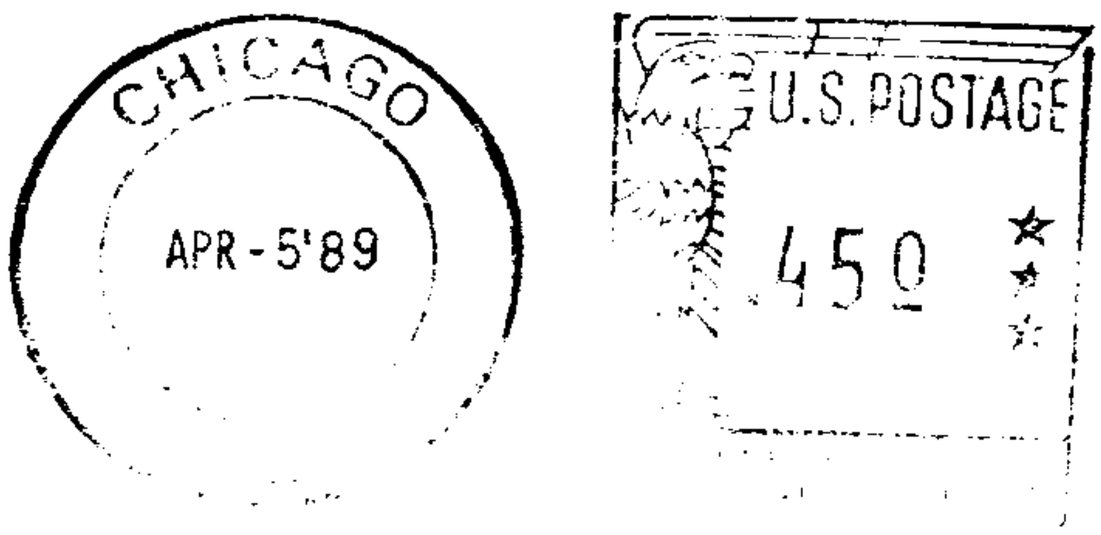
from Myarc. Tom and I have put this on a SS/SD floppy along with GPL 1.04. Both programs are archived in order to fit them both onto one disk. You'll need Barry Boone's Archiver 3.02 to unpack it. Get Advanced Basic and GPL 1.04 in the library for $2.00
By the way, when ordering disks, please tell me the disk name and or what's on it. Tom and I aren't the most organized people around. I forget where I lay my Chicago TImes sometimes. When I get orders like send me the Geneve disk you were talking about on page 22 of the Oct issue, I don't know what you're talking about. I talk so much I can't remember what I said. Please order all disks by a Name, Number or Filename.
The following list of disks are all 9640 programs. I just put 70 full disks of TI stuff into the library. It's time to give the 9640 boys a few things. Wait a minute!!! Don't you TI ONLY people turn the page!!!! 8 of these disks are for the TI. Your review is coming.
MOUSE and BOOT3 are on disk together for $2.00. This is a menu to be used with your Myarc Mouse. Boot3 is a menu boot program.
GMENU is a big batch file type menu. Something like the Halett we already have. It's 207 sectors. Price is $2.00
My Word 1.22 and Myarc Disk Manager 5 v 1.28 are archived on a disk together. My Word 1.22 is Peter Hoddie's word processor for the 9640. MDM 5 is the latest manager for Myarc's Hard Floppy Disk Controller card. Get both for $2.00
The 5th disk contains JS_GPL, FIXGIF, FIXGIF/DOC and XBEACART. JS_GPL is Jim Schroeder's GPL menu version 1.04. It is totally compatible with DOS 1.14. It's the best thing going!!! FIXGIF with docs is from John Johnson. Run this program on GIF programs you are having trouble loading. It strips out the unnecessary garbage from the header and makes it a runnable GIF. XBEACART is also from Jim Schroeder. Jim has modified EA and XB to reside within the same cartridge. This file breaks down into 7 files (C to C6). Go into GPL and load C just has you would any cartridge. You will now be able to run EA and XB programs. Here's the best thing to do. Load Jim's GPL. Then load XBEACART. You will then have Jim's GPL menu with EA and XB cartridges loaded. It's GREAT!!!!! The complete disk is $4.00
The 6th disk contains Randy Moore's Mouse Menu 2.3. Included with the disk is the source code. Check it out. It's a re-make to Johnson's HRD menu. Use your mouse to select to option you want to run. Very nice. Get this one today for only $2.00
I've been grossly negligent about mentioning that we have Jim Schroeder's NOTMYCOPY disk in the library. YES, we do have it. This is Jim's neat GPL copy program for the 9640. If you liked REDISK-IT, you'll love this one. Remember it's Fairware. Please send Jim a donation. Get the disk from us for $2.00
This next disk can be used by 9640 and TI people. It contains BOOTMENU, PARKIT and PARK. BOOTMENU will allow you to boot up a menu without the use of a HRD. PARKIT and PARK are used to park the heads on your hard drive. One of the 2 is for the 9640 only. But, I can't remember which. Either way, you get both. The disk is only $2.00.
This next disk contains RAT and LIB. RAT is Johnson's mouse menu program that was written about in Micropendium. It will work with DOS 1.08 only. LIB is some sort of Assembly Library Object something or other. It's from Clint Pulley. I haven't check it out yet so I can't tell you anything at all about it. Buy the disk, check it out and write me a letter. Get this disk for $2.00. (Great review uha?)
Anybody into fansy games with great graphics? This one is great. It was among those uploaded to me by Ron Paswinski. It was up on Genie so we think it's PD. There's no copyright of any sort on it. It could be a cartridge TI was going to release but never did. It's called FANTASY. If anyone knows anything about it, please let us know. We will treat it like Public Domain till we hear different. There are 4

parts to the game. You start off in a hot air balloon. While flying, a ship below you is shooting at you. You must dodge the bullets and land on the ship. Comes part 2. You do battle on deck. Once you gain control, to land on an island. Part 3, make your way through the jungle. Part 4, I'm not telling. The nice thing about this game is you can choose which part to play. If you can't make it from part 1 through part 4, skip them. Just go directly to the part you want to play. This game is made up of 6 34 sector EA 5 files. Which tells me it was a cartridge dump. 99/4A people with a Gram Kracker type device will be able to run this. 9640 people just load it in through GPL. Check it out. I think you'll enjoy it. Too bad we don't know where it came from. Get it from the library. Selling price is just $2.00.
9640 owners looking for something that will run from DOS? This next disk has a few. It contains MDOSUTIL and GBASE. MDOS Utils is a nice set of commands MDOS can handle. Included is XDIR, XTYPE, XDEL, PROT and UNPRO. Docs are also included. They're all from John Johnson. Boy has he been busy. XDIR will do a directory on your floppy or hard drive. It will do an entire drive, a directory or look just for particular file types. XTYPE will dump the contents of any file to screen or printer. XDEL deletes files. PROT and UNPRO will protect and unprotect files. GBASE is a Data Base that runs from DOS. It is limited now but has much potential. Get all this for only $2.00
Randy Moore has been very busy. This is his best yet. SECTOR-1. It is one of the best Floppy/Hard drive sector editors I've seen released. This is simply a MUST HAVE for your hard drive. It runs in 80 columns on both the 4A and 9640. Get this Fairware disk for $2.00. I must cut myself short here. I'll review this one again later. BUY IT
I know I'm really late with this one. I haven't done mine yet. Maybe I'll be able to use it. It's called TITAX. It's really a super nice fairware Federal Tax program. Keep this one going and make tax - time a piece of cake. Get it for only $2.00
I have to start getting out of here. I said I wouldn't review everything. Here is what else we have. They'll all be available at the April meeting.
GEE - Graphics drawing program from Australia - $2.00
C 99 Windows Source - Source for c Windows by Clint Pulley - $4.00
C 99 for MDOS. Run c from Myarc DOS - $4.00
C 99 Libraries. Haven't run this one yet. - $4.00
C 99 Windows. Haven't run this yet either. - $4.00
Printer Utilities 1. Set of print utils. - $4.00
Printer Utilities 2. Another set of print utils. - $4.00
I have also put Clint Pulley's Quick and Dirty Developement System on the same disk with MDM 5 and My Word 1.22. This archived file includes Clint's Quick and Dirty Editor etc. $2.00 for all 3 archived files. What a deal.
OK, let me get out of here. I'll be back next month to finish everything up. I'll be able to check out the files I haven't run yet. I'll also tell you more about Randy Moore's SECTOR-1 program. This page limit and deadline are drawing near the end. Got to go. I'll be yaking at ya next month. Catch ya later.

Chicago TI User's Group
P.O. Box 578341
Chicago, Ill. 60657

First Class Mail

Address Correction Requested



Notes from the Editor

Hey, I think we have another winner this month. I think we have a little something for everyone. I want to thank all the authors for all the hard work they've put into their articles. You've all done a great job. This nice newsletter is a reflection of all your hard work. Thanks for helping me make things look so good.

Last month I had to leave out Bill Gaskill's part 2 review on TI Base. Again this month, I was forced to do the same. Sorry, Bill. I'll try to get it in next time. Thanks for your Four A Talk article this month though.

Everyone please read all pages of this month's newsletter very carefully. Please note that we are meeting at a new place in April. Also note that the meeting is the second Saturday of the month, 4/8. There is a map on the inside cover and directions on page 2.

We have some big events coming up. There are only 3 meetings left till summer break. Please make a note of the following information so you'll be ready for them when they happen.

Our April meeting will feature Jan Janowski and his HOME MADE TI PORTABLE computer. What a fantastically beautiful project. Please plan to attend. Jan suggest you bring paper and pencil. He'll be giving out some fantastic information he's discovered. ATTA BOY, JAN!!!!!!!!

May will feature our programming contest. Get your entries in as soon as possible. Remember, no names. Send us your disk marked for the contest along with a user #. Contest open to all members.

June will feature our annual auction. If you have a piece of hardware or software you'd like to donate, please get it in a.s.a.p. Please mark if it's in good or bad working condition. Look around the house for those full heights, cartridges and printers you don't need anymore. I'm sure someone in the club could find a use for it.

Please help make the meetings more enjoyable. We need your help. Triton College always furnished us with TV's so you could see what was happening. We don't enjoy that pleasure now. We need a few people to bring TV's to the meetings. If you have a TV you'd like to share with us, please do so. Hopefully 19" and color. But we'll take anything.

Membership — $21.00. Payable in Jan